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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,269	06/23/2005	Mitsuhiro Kataoka	KATA3001/REF	1432

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BACON & THOMAS, PLLC
625 SLATERS LANE
FOURTH FLOOR
ALEXANDRIA, VA 22314

EXAMINER	
LE, DANG D	

ART UNIT	PAPER NUMBER
2834	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/540,269	KATAOKA, MITSUHIRO	
	Examiner	Art Unit	
	Dang D. Le	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) *4 and 5* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 June 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-3 and 6 in the reply filed on 4/8/08 is acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakagami et al. (5,134,324) in view of Matsui et al. (3,924,537).

Regarding claim 1, Sakagami et al. shows a motor in an apparatus of electrically opening and closing a sliding door, comprising:

- a linear magnetic pole row (22, Figure 3 in which N poles and S poles are alternately arranged at a fixed pitch (p), the linear magnetic pole row being placed in an upper end portion of the sliding door (column 3, lines 5-10);
- a set of wire (11) in which elements in a direction of an axis Y are arranged in a direction of an axis X at the fixed pitch (p), the wires being fixed to a building so as to face to said linear magnetic pole row (22); and
- a means (Figure 5) for sending an electric current through said wires,

- three axes X, Y and Z being orthogonal to each other, the axis X being set in a direction of an opening and closing movement of said sliding door, and the axis Z being approximately vertical.

Sakagami et al. does not show a motor using a rectangular wave wire with two sets of rectangular wave wires; wherein said two sets of rectangular wave wires are shifted by a half pitch (p/2) from each other in the direction of the axis X, and said means for sending an electric current has a function of alternately switching the electric current application of any one set of rectangular wave wire to the other set of rectangular wave wire, every time when the linear magnetic pole row (2) fixed to said sliding door moves by one half pitch (p.2).

Matsui et al. shows a motor using a rectangular wave wire (1a, Figures 2 and 3a) with two sets of rectangular wave wires; wherein said two sets of rectangular wave wires are shifted by a half pitch (p/2) from each other in the direction of the axis X (Figures 15 and 16), and means for sending an electric current (Figure 1) has a function of alternately switching the electric current application of any one set of rectangular wave wire to the other set of rectangular wave wire, every time when the linear magnetic pole row fixed to said sliding door moves by one half pitch (p.2) for the purpose of providing a smooth driving force.

Since Sakagami et al. and Matsui et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use a motor comprising a rectangular wave wire with two sets of rectangular wave wires; wherein said two sets of rectangular wave wires are shifted by a half pitch (p/2) from each other in the direction of the axis X, and said means for sending an electric current has a function of alternately switching the electric current application of any one set of rectangular wave wire to the other set of rectangular wave wire, every time when the linear magnetic pole row fixed to said sliding door moves by one half pitch (p.2) as taught by Matsui et al. for the purpose discussed above.

Regarding claim 3, Sakagami et al. also shows a rail-cum-case having an angular C-shaped cross section (1), and having a shape schematically similar to a curtain rail is provided to the motor, said wire (11) is attached to an inner surface of said rail-cum-case, and said linear magnetic pole row (22) can pass through a space within said rail-cum-case in the direction of the axis X.

4. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakagami et al. in view of Matsui et al. and further in view of Yagoto et al. (6,064,128).

Regarding claim 2, the machine of Sakagami et al. modified by Matsui et al. included all of the limitations of the claimed invention except for said means for sending an electric current is provided with a measure which is arranged in the direction of the axis X and attached to the sliding door, and an optical sensor which reads a moving distance of said measure and is attached to the building, and said optical sensor has a

function of outputting a detected signal every time when said measure moves by one half pitch (p/2).

Yagoto et al. uses optical sensor (41) for the purpose of increasing accuracy (noise being suppressed).

Since Sakagami et al., Matsui et al., and Yagoto et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use optical sensor as taught by Matsui et al. for the purpose discussed above.

Regarding claim 6, Sakagami et al. also shows a rail-cum-case having an angular C-shaped cross section (1), and having a shape schematically similar to a curtain rail is provided to the motor, said wire (11) is attached to an inner surface of said rail-cum-case, and said linear magnetic pole row (22) can pass through a space within said rail-cum-case in the direction of the axis X.

Information on How to Contact USPTO

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D. Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dang D Le/
Primary Examiner, Art Unit 2834

5/8/08